We Claim:

1. A method of preparing a phosphor screen having at least a substrate and a phosphor layer comprising a $CsX:Eu^{2+}$ phosphor wherein X represents a halide selected from a group consisting of Br and Cl, wherein said phosphor is deposited by physical vapour deposition on said substrate characterised in that during deposition said substrate is at a temperature in the range of 135°C to 235°C and wherein a variation of the temperature of the substrate occurring during said deposition process is not more than 50°C.

2. A method according to claim 1 wherein said variation of the temperature of the substrate is not more than 30°C.

3. A method according to claim 1 wherein said variation of the temperature of the substrate is not more than 20°C.

4. A method according to claim 1 wherein said phosphor layer is deposited at a temperature in the range of 150°C to 220°C.

5. A method according to claim 4 wherein said variation of the temperature of the substrate is not more than 30° C.

6. A method according to claim 4 wherein said variation of the temperature of the substrate is not more than 20° C.

7. A method according to claim 1 wherein said phosphor layer is deposited at a temperature in the range of 170°C - 200°C and wherein said variation of the temperature of the substrate is not more than 20° C.

8. A phosphor screen prepared according to claim 1.